

MDB Beam Test Facility Plan

October 21, 2010

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Thru October 29

--- Continue in present configuration to investigate proton ion source operating parameters

November 1 – November 12

--- Re-convert 50 keV beam line to “Wai Ming” configuration; re-establish beam positions for RFQ alignment purposes and re-measure emittance with slit & wire if time permits

--- Begin installation of RFQ RF power transmission system

--- Continue installation of 2.5 MeV diagnostic line (configuration decisions by ~Nov 8)

November 15 – Beam off

--- As-found survey of LEBT and downstream wire scanner(s)

November 15 – December 1

--- Re-install RFQ into beam line position and re-connect to ion source OR do not connect to ion source (does this make sense or should it all be done at once?, are we in configuration to permit this w/o moving ion source/LEBT [just close LEBT vacuum valve?])

--- Begin Six-Cavity Test RF power distribution system installation

December 2 – December 23

--- Re-condition RFQ with RF power

- No water; water lines evacuated with separate vacuum pump
- No water; water lines filled with atmospheric air
- With cooling water

--- Begin installation of Six-Cavity Test cabling and other preparatory work

January 4 – January 14

--- Re-commission 2.5 MeV beam

January 18 – February 4

--- 2.5 MeV beam energy, emittance, and energy spread measurements

February 7 – March 4

--- 2.5 MeV beam longitudinal measurements

March 7 – Beam off

--- Six-Cavity Test beam line and supporting systems installation

--- Begin preliminary tests of installed Six-Cavity Test subsystems

--- Commission new klystron

June 1 –

--- Six-Cavity Test commissioning

H- ion source installation (when?) will take ~ 3 months including RFQ removal and re-installation (to permit 50 keV H- beam characterization measurements including emittance, focusing, and positioning for alignment measurements).

2.5 MeV H- commissioning will require installation of suitable diagnostics configuration to measure emittance, energy, energy spread, and longitudinal parameters. This will ? require disassembly of whatever is downstream of the RFQ at that time.

Subject of special meeting(s)...